

HANS RAJ COLLEGE

UNIVERSITY OF DELHI

NAME OF WORK: Supply & Installation of RO System 3000 Lph at Hans Raj College,University of Delhi.

Cost of Tender Form: Rs. 500/-

EMD: Rs. 20,000/- By Draft/Pay order/Bank Guarantee from national bank payable Principal, Hans Raj College,University of Delhi.

Tender Opening Date: 3:30 PM in Principal's Office on 12-12-2015

Estimated Cost: Rs. 10 Lac

Sale of Tender Documents: 24-11-2015 from 11AM TO 3 PM

Last Date of Sale of Tender application: 11:00 to 15:00 upto 08-12-2015

Tender Submission Date &Time: 08-12-2015 upto 5:00 PM

HANS RAJ COLLEGE**UNIVERSITY OF DELHI**

NAME OF WORK: Supply & Installation of RO System 3000 Lph at Hans Raj College, University of Delhi (Specifications)

S.NO.	Item of work	unit	Qty.
	WATER TREATMENT PLANT BASED ON RO TECHNOLOGY		1
	Supply, erection, installation, testing and commissioning of SKID MOUNTED PLC BASED RO BASED Water Treatment Plant of capacity 3000 LPH and consisting of the following.		
1.	Supply Installation Testing Commissioning of Raw Water Pump 6000 LPH 30mtr Head with Complete SS316, Horizontal Line Pump 1.2 kw CM 10-2 make Grunfos or DP(1+1).	No.	2
2	Supply Installation Testing Commissioning of High Pressure Pump CRE5-36 Pump Motor Set with Inbuilt VFD, Casing CI, Impeller SS304, Shaft SS316, IE2 5.5 kw make Grunfos or DP(1+1)	No.	2
3	Supply Installation Testing Commissioning of Garnet Filter: The material of construction shall be fibre glass of diameter 750 mm with Multiport valve and media.	Set	
4	Supply Installation Testing Commissioning of Electronic metering system consisting 0-6 lph PP pump along with one HDPE tank of 100 litres capacity with a positive displacement diaphragm having fixed and variable flow rate valves, strainers & injectin fittings complete for antiscaling dosing.	No.	2
5	Set of 5 nos big blue PP 5 micron carriage filter with housing to achieve particle filtration of less than 5 microns.	set	1
6	Supply Installation Testing Commissioning of High RO	set	1

	modules capable of giving net treated water output of 3000 lph.The RO Modules shall be made out of spiral wound thin film composite.Suitable BSPT/NPT connections shall be for connecting feed & reject ends. The modules shall be supplied complete with all necessary instrumentation,valves for sampling drain.Reject&permeate.All structural steel bases and supports shall be painted & epoxy coated.The system recovery shall be 60% .it should have following item.		
6.a	Membrane Housing with side port make pentair		
6.b	3 nos Membrane make DOW		
7	Supply Installation Testing Commissioning of high PPLC based instrument panel with MIMIC having main contractors for all pumps, 3 phase-thermal overload relay. The control panel for monitoring and control of RO system shall include all required signal lamps, HRC fuses annunciating box with hooter.All control panel cabling along with double earthing between panel shall be included in the scope of supply of the contractor. On line conductivity meter with selector switch for auto/manual operations be provided in the panel. The panel shall have following interlockings.	set	1
7.a	The plant starts when the level at RO storage tank is low and stops when the level at RO storage tank is high.		
7.b	When the level is low ,thestarts,HPP starts after two minutes of starting of Raw water pump.		
7.c	The reject valve closes after 1 minute of starting of High Pressure Pump.		
7.d	If the pressure at High Pressure Pump suction is low,theplant trips.		
7.e	When the plant stops due to high level,first the High Pressure Pump stops,after two minutes the Raw water pump and antisclant/SMBS/Ph/Chlorine dosing pump		

	stops,closing the inlet valve.		
7.f	When ORP is high the dump valve opens and High Pressure Pump trips.The Raw water pump and dosing pumps keep running for ORP adjustment.		
8	Plant should have adequate level of instrumentation like digital flowmeter,pressuregauges,pressure switches conductivity meter to enable easy flow in the plant.All high pressure piping shall be in SS.	set	1
9	SDI kit,Hand held phmeter,TDS meter and online Totalizer	Set	1
10	One lot of chemicals consisting of 20kgs antiscalent,5 kgs SMBS,5kgs NaOC1,5kgs NaHCO3	Lot	1
11	Any other item which the bidder wants to add for requirement of successful commissioning of the system		
12	SS 304 Storage Tank for 3000 Lts Make Aquarius.	LS	

Acting Principal

Hans Raj College